TESTIMONY TO REPRESENTATIVE GRIJALVA'S SUBCOMMITTEE AND THE SUBCOMMITTEE ON ENERGY AND MINERAL RESOURCES REGARDING URANIUM MINING ISSUES IN NORTHERN ARIZONA

Lawrence E. Stevens, PhD, Senior Ecologist
Grand Canyon Wildlands Council, Inc.
P.O. Box 1594
Flagstaff, AZ 86002
(928) 556-9306 TEL
(928) 380-7724 Mobile
farvana@aol.com

7 April 2008

I am a 35-year resident of northern Arizona and am an ecologist. I run a small ecological consulting firm in Flagstaff called Stevens Ecological Consulting, LLC. I primarily work on ecosystem management and restoration, with an emphasis on improving understanding of biodiversity and ecosystem health, and applying that information to sustain and enhance native species and natural ecosystems. In particular over the past decade, I have focused my professional attention on springs and riparian areas management, and have published numerous peer-reviewed scientific articles on the status and conservation of water-related resources in the Southwest and the nation. I also am the voluntary Curator of Ecology and Conservation for the Museum of Northern Arizona, and the Senior Ecologist for the Grand Canyon Wildlands Council, Inc., an ecosystem conservation organization based in Flagstaff. With this background, I consider myself qualified to comment on the need for adequate planning of mineral resource extraction here on the southern Colorado Plateau.

Representative Grijalva recently introduced H.R. 5583, the Grand Canyon Watersheds Protection Act of 2008, proposing to withdraw approximately one million acres near the Grand Canyon from mineral exploration. I see this legislation as being necessary to better protect our northern Arizona ecosystems from runaway exploitation of

the region's mineral resources. Here I provide testimony in support of this legislation, and against the Forest Service's proposal to expand uranium mining on public lands in this region.

The Grand Canyon ecoregion is revered as one of the world's greatest scenic landscapes, supporting numerous national parks, wilderness areas, more than 70 ecosystems, 2000 plant species, and an enormous diversity of native animals, including many rare and endangered species. The region deserves to be protected in its natural state for all Americans and for future generations. Opening the landscape to widespread uranium mining will degrade this landscape and future life here.

Uranium pollution through contamination of groundwater and dust is widely known to be dangerous to humans and natural ecosystems. Many residents of this area were down-winders, who suffered high rates of cancers related to above-ground nuclear testing in the 1950's. There likely were significant downwind impacts on the natural ecosystems of the Grand Canyon region; however, such impacts have received inadequate study here. Additional uranium mining activities are likely to bolster radiation levels, and are likely to degrade the quality of all life here on the southern Colorado Plateau.

Groundwater in this region is directed from areas of infiltration through fractures and faults, and emerges in springs, particularly in and along the rims of Grand Canyon and its numerous tributaries. Groundwater residence time ranges from seasonal, to more than 3000 years, according to recent U.S. Geological Survey research in Grand Canyon. Mining activities are likely to contaminate groundwater or create surface pollution that may be transferred into these groundwater aquifers. Such contamination may affect water quality in springs that are essential resources for fish and wildlife, backpackers, and water quality in the Colorado River, and the impacts of uranium mining on the region's groundwater and springs may persist for thousands of years.. The ecological uncertainties involved in groundwater flow in this region are many, and the precautionary principle should be invoked as a management strategy: do the least damage to irreplaceable resources in the Grand Canyon region.

Uranium mining already has occurred in this region, and the area has many potential uranium mining sites, with several claims under consideration for exploration,

and more than 1200 breccia pipes discovered in the region by the U.S. Geological Survey thus far. Allowing uranium mining exploration to start up will mean that these, and potentially many other uranium mines in the region will be opened. The precedent of opening several new mines makes it very difficult to dissuade the mineral extraction industry from proposing and opening additional mines. Therefore, it would be better to limit uranium exploration and mining immediately, before a mining boom occurs that results in gradual, long-term degradation of the Grand Canyon region.

The impacts of uranium mining are numerous, including:

1) release of contaminated dust;
2) groundwater contamination, resulting in reduced capability of aquifers to provide clean water to springs, streams, and wells, from which most of our community water supplies are derived.
3) piling uranium rich material on site, which many contaminate surface waters during rainstorms, and may deliver radioactive materials into the two largest reservoirs in the coterminous United States (Lakes Powell and Mead) ;
4) construction and maintenance of additional roads that fragment the landscape, interrupt wildlife movement, and create additional dust problems;
5) on- or off-site ore processing that creates additional point and non-point source radiation pollution;
6) site clean-up, which rarely if ever recreates ecosystems with equivalent health and capacity.

Previous uranium mining in the Grand Canyon ecoregion has been disastrous: the Church Rock and Hack Canyon uranium mining accidents took place in tributaries of Grand Canyon in the 1970's, the latter resulting in livestock and human injury and death. These were the two largest radioactive spills in our nation's history of peacetime nuclear energy production. Uranium mining in this region should be stopped before it is started, to prevent future environmental and societal disasters.

The above uranium mining accidents occurred despite mining inspection regulations under the auspices of the 1872 Mining Act, one of the our country's most fiscally and environmentally irresponsible pieces of legislation, an Act that should be revised at your earliest opportunity to better protect our nation's environmental and financial resources.

For these reasons, and with all due respect, I laud this approach to protect the water, air, natural ecosystems and native species in the Grand Canyon ecoregion from uranium mining damages. I urge both Congress and the Senate to ratify the proposed legislation, and help keep this region healthy and sustainable for American citizens, our children, and future generations.

Post Script: *Our primary concern is that environmental and societal safety and the economic benefits to our region and country should outweigh what appear to us as considerable uncertainty and risks associated with opening the Grand Canyon region to widespread uranium mining. Following the hearings, and after hearing testimony by all sides, I realized that this investigation and decision process would benefit most from an unbiased review of the environmental, economic, and cultural impacts and consequences of uranium mining in the Grand Canyon region. Therefore, we at the Grand Canyon Wildlands Council recommend that such a review be conducted, perhaps by the National Research Council, or some other well-informed and unbiased organization. Such a review will clarify many aspects and claims from environmentalists and the mining industry alike as to the wisdom of pursuing uranium exploration and mining in northern Arizona.*

We thank you again for the opportunity to voice our concerns about this important issue.